

## OIB - HU-25C Guardian 10/06/15 Science Report

**Aircraft:**

[HU-25A Guardian #525](#) ([See full schedule](#))

**Date:**

Tuesday, October 6, 2015

**Mission:**

OIB

**Mission Location:**

Thule, Greenland

**Mission Summary:**

Mission: Falcon IceSat-2 North (priority: high)

This mission is designed to overfly planned IceSat-2 ground tracks over a wide range of ice regimes near Thule. We center some of the flightlines on each of three beam pairs (left, nadir and right) in turn, sampling at least one of each beam pair during this mission. The east-west crossing line is designed to capture as many ascending/descending crossovers as possible. We also fly a particular flowline of Petermann Glacier which has been sampled intermittently during the ATM and OIB eras, overflying two GCNet sites in the process. This mission is identical to the mission flown in Spring 2015, except that the uppermost/easternmost two lines have been removed.

Weather was not ideal for this mission today, with a compact low-pressure system in Melville Bay creating low cloudiness (due to orographic uplift along the steeply rising ice sheet margin) near the southern ends of this mission's data lines. The northern section of the flight was partly covered in cirrus clouds, and these clouds made it impossible to judge whether the skies beneath them were clear from satellite imagery. However we were confident we would successfully acquire data for much of the flight, including the majority of the IceSat-2 groundtracks, and since today was our last chance to fly in Thule before moving to Kangerlussuaq tomorrow, we chose to fly. We selected an altitude of 29,000' MSL to give us a chance to work below the cirrus clouds, but this turned out to be unnecessary because most of the cirrus had dissipated by the time we got there. However the cirrus had indeed hidden some thin low clouds over the lower portion of Petermann Glacier, and we obtained very little data there. We also lost a small amount of data over the northernmost portion of Humboldt Glacier, due to low clouds encroaching from the nearby water. In total, we estimate that we successfully obtained data from all three instruments over 85% of the flight line.

All instruments performed well today.

We conducted a ramp pass at 20,000' MSL.

Data volumes:

DMS: 13.2 Gb

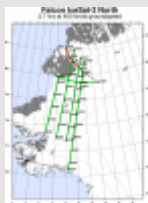
Narrow Swath ATM: 22 Gb

FLIR: 2.0 Gb

total data collection time: 3.7 hrs

**Images:**

### Map of Falcon - IceSat 2 North



[Read more](#)

### Weather satellite image from this morning



[Read more](#)

## Margin of Petermann Glacier



[Read more](#)

**Submitted by:**

John Sonntag on 10/06/15

**Related Flight Report:**

## HU-25C Guardian 10/06/15

**Flight Number:**

OIB2015 Arctic Ice-Sat2 North

**Payload Configuration:**

ATM & DMS

**Nav Data Collected:**

No

**Total Flight Time:**

4 hours

**Submitted by:**

Luci Crittenden on 10/06/15

**Flight Segments:**

<b>From:</b>	BGTL	<b>To:</b>	BGTL
<b>Start:</b>	10/06/15 11:11 Z	<b>Finish:</b>	10/06/15 15:10 Z
<b>Flight Time:</b>	4 hours		
<b>Log Number:</b>	<a href="#">16F002</a>	<b>PI:</b>	John Woods
<b>Funding Source:</b>	Thomas Wagner - NASA - SMD - ESD Cryosphere & International Polar Year		
<b>Purpose of Flight:</b>	Science		
<b>Comments:</b>	OIB completed its last science mission out of Thule on the HU-25 for this deployment today - the Ice-Sat2 North science mission. Weather was not favorable in areas of interest to do a second flight today. The team will pack up this evening. Tomorrow is a transit day to Kangerlussuaq for the second portion of this Melt Season data collection deployment.		

**Flight Hour Summary:**

	15F005	16F002
<b>Flight Hours Approved in SOFRS</b>	100	
<b>Flight Hours Previously Approved</b>		67.4
<b>Total Used</b>	32.6	65.3
<b>Total Remaining</b>		2.1
<b>16F002 Flight Reports</b>		

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
<a href="#">10/05/15</a>	OIB2015 Arctic Sea Ice Central	Science	3.6	3.6	63.8
<a href="#">10/05/15</a>	OIB2015 Arctic Sea Ice East	Science	3.8	7.4	60
<a href="#">10/06/15</a>	OIB2015 Arctic Ice-Sat2 North	Science	4	11.4	56
<a href="#">10/07/15</a>	OIB2015 Arctic Transit Thule to Kangerlussuaq	Transit	2	13.4	54
<a href="#">10/08/15</a>	OIB2015 Arctic Southwest Coastal A	Science	3.8	17.2	50.2
<a href="#">10/08/15</a>	OIB2015 Arctic Thomas-Jakobshavn 01	Science	3.7	20.9	46.5
<a href="#">10/09/15</a>	OIB2015 Arctic Umanaq B	Science	3.9	24.8	42.6
<a href="#">10/13/15</a>	OIB2015 Arctic Jakobshavn Equip Store	Science	2.9	27.7	39.7
<a href="#">10/13/15</a>	OIB2015 Arctic Southeast Coastal A	Science	3.6	31.3	36.1
<a href="#">10/18/15</a>	OIB2015 Arctic Southeast Coastal B	Science	4.1	35.4	32
<a href="#">10/19/15</a>	OIB2015 Arctic Helheim-Kangerdlugussuaq	Science	3.7	39.1	28.3
<a href="#">10/19/15</a>	OIB2015 Arctic Helheim-Kangerdlugussuaq Gap B	Science	3.9	43	24.4
<a href="#">10/20/15</a>	OIB2015 Arctic Jakobshavn Mop-Up	Science	3.7	46.7	20.7
<a href="#">10/20/15</a>	OIB2015 Arctic Southwest Coastal B	Science	3.7	50.4	17
<a href="#">10/21/15</a>	OIB2015 Arctic Southwest Coastal C	Science	3.4	53.8	13.6
<a href="#">10/21/15</a>	OIB2015 Arctic K-EGIG-Summit	Science	3.7	57.5	9.9
<a href="#">10/22/15</a>	OIB2015 Arctic Mopup South	Science	2	59.5	7.9
<a href="#">10/22/15</a>	OIB2015 Arctic Ferry BGSF-CYYR	Ferry	2.2	61.7	5.7
<a href="#">10/23/15</a>	OIB2015 Arctic Ferry CYYR-KRIC	Ferry	3.3	65	2.4
<a href="#">10/23/15</a>	OIB2015 Arctic Ferry CYYR-KRIC	Ferry	0.3	65.3	2.1

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*Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.*

#### 15F005 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
<a href="#">09/15/15</a>	OIB #1	Check	2.7	2.7	97.3
<a href="#">09/20/15</a>	OIB #2, 3, 4	Ferry	2.7	5.4	94.6
<a href="#">09/21/15</a>	OIB #2, 3, 4	Ferry	2.3	7.7	92.3
<a href="#">09/21/15</a>	OIB #2, 3, 4	Ferry	2	9.7	90.3
<a href="#">09/23/15</a>	OIB2015 Arctic North Central Gap 02	Science	3.9	13.6	86.4
<a href="#">09/24/15</a>	OIB2015 Arctic Northwest Coastal A	Science	3.7	17.3	82.7
<a href="#">09/25/15</a>	OIB2015 Arctic Northwest Coastal B	Science	3.8	21.1	78.9
<a href="#">09/28/15</a>	OIB2015 Arctic Sea Ice West	Science	3.7	24.8	75.2
<a href="#">09/30/15</a>	OIB2015 Arctic North Central Gap 01	Science	3.9	28.7	71.3
<a href="#">09/30/15</a>	OIB2015 Arctic Zachariae-79N	Science	3.9	32.6	67.4